



March 2017

The Bolin Centre is a multi-disciplinary consortium that conducts research, graduate education and outreach related to the Earth's climate.

If you have news, please email us on bolin@su.se

We ask all scientists for news about

- Publications
- Funding
- Outreach
- Anything else you think we should know about

Director's corner

- The budget for the Bolin Centre will be taken by the Board at its meeting on March 7.
- Jerker Jarsjö and Örjan Gustafsson will step down as research area co-leaders. We extend our thanks to them for supporting the Bolin Centre for many years!
- The External Science Advisory Group, which gives the Bolin Centre advice, has got new members. The group now consists of: Deliang Chen (University of Gothenburg), Eystein Jansen (Bjerknes Centre for Climate Research), Karen Kohfeld (Simon Fraser University), Anders Lindroth (Lund University), Camille Parmesan (Plymouth University), Raymond T. Pierrehumbert (University of Oxford) and Andrea Rinaldo (Ecole Polytechnique Fédérale de Lausanne).
- The second seminar in our new seminar series hosted by RA2 was on February 27. The talk, which was given by Professor Merete Bilde from Aarhus University, was about sea spray aerosol and cloud droplet formation.
- Thanks to Bolin Centre scientists Per Holmlund and Gunhild Rosqvist who have recently appeared in the media both talking about retreating glaciers in a warming climate.
- The Directorate is presently helping plan of our new Climate Festival, which is an open event for society scheduled for May 15-18 and focusing on climate change and what we can do about it. The festival represents a partnership with Vetenskapens Hus.

Research Area 1: Oceans-Atmosphere Dynamics and Climate

- RA1 together with RA6 ran a very successful workshop on the Eocene-Oligocene climate transition when Antarctica became fully glaciated for the first time. About 30 world experts and local researchers and interested participants gathered for three days to present and discuss the latest research and a resulting review paper is now in progress.
- Plans have started for a workshop on extreme meteorological events in October 2017.
- Karen Kohfeld, new ESAG member from Simon Fraser University, will visit 6-10 March. She will give a seminar on Wednesday 8 March at 15:00 in Högbomsalen on the timing of various processes that affect oceanic carbon uptake during the last glacial.
- Gabriele Messori and colleagues are running a special issue of the Journal *Complexity*, focusing on dynamical systems and statistical mechanics techniques applied to climate science. The call for papers can be seen here: www.hindawi.com/journals/complexity/si/126089/cfp.

Research Area 2: Clouds, Aerosols, Turbulence and Climate

- An RA2 seminar was given by Prof. Merete Bilde from Aarhus University on the 27th of February on "Sea spray aerosol and cloud droplet formation".
- We have sent out an invitation for a one-day RA2 workshop that will be held on Monday the 8th of May in Högbomssalen in Geohuset. The workshop will provide all members of the research area with the opportunity to

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learn more about the ongoing research within RA2, to explore possibilities for collaborations and to learn more about the possibilities for obtaining funding from the research area. The workshop will consist of both speed talks and longer presentations by invited speakers covering the major research topics within RA2. You need to register to attend before March 17th at the following link: <https://goo.gl/forms/73uCIWgzYomkAPDX2>

- We have decided to fund the following activities:
 - We have funded a workshop (~9000 SEK) held at ACES on 31st of January 2017 with the focus on using synchrotron-based tools to improve our understanding of atmospheric aerosols.
 - Grant of research visit application for Anna Fitch (SMHI) (~37600 SEK) for research visit at the Pacific Northwest National Laboratory (PNNL) in the USA. The purpose of this visit is to work on new methods of representing sub-grid vertical velocity for aerosol activation in global climate models.

Research Area 3: Hydrosphere, Cryosphere and Climate

- We are developing projects for 2017 with RA3 researchers and researchers from other RA:s. These include possible collaboration with researchers in RA7 on the role of wetlands in the landscape, including aspects of hydro-climate and ecosystem services. We also explore possible projects on hydro-climate and permafrost. Both these topics are of interest for many RA3-researchers. Project suggestions are welcome also on other topics, contact us if you have ideas!

Research Area 4: Biogeochemical Cycles and Climate

- Ö. Gustafsson steps down as co-leader of RA4. To date, no successor, but will be considered.
- Stefano Manzoni co-organizes the Biogeomon 2017 in Prague and is keynote speaker with the RA4 flagship project Carbon Use Efficiency.
- RA4 will initiate a monthly seminar series on Biogeochemical Cycles and Climate with emphasis on internal participants.
- Bolin Centre scientists are invited to submit proposal for flagship projects (scale 150 kSEK/year) to RA-4. As previously, preference will be given to projects with cross-disciplinary nature bridging over different departments. Open deadline.

Research Area 5: Historical to Millennial Climate Variability

- RA5 has had a relaunch/kick off on Feb 27th that was well attended. We had people showing 5-minute presentations and discussions followed.
- RA5 will be taking in applications for funding until March 15th, 2017. We are happy to support workshops for maximum of 50 kSEK as well as individual collaborative projects for hopefully (new) collaborations within RA5 and the Bolin Centre. A maximum of 50 kSEK for a project is suggested. We are also supporting (particularly) early stage scientists for analyses, conferences, visits, etc. For application forms contact the RA5 leaders.

Research Area 6: Deep Time Climate Variability

- The projects from the last round of RA6 funding applications are moving along nicely.
 - Dr Davit Vasilyan from the Jurassica Museum, Switzerland, will be visiting Dr. Thomas Mörs, Dept. Palaeobiology, Swedish Museum of Natural History, Feb. 24 - March 10. RA6 is funding his visit, to work together with RA6 member Dr. Mörs on the project: Palaeoecological interpretation and precipitation estimation (regional climate development) based on Miocene herpetofaunal assemblages from Central Europe.
- Dr. Vasilyan will give a lecture on his research at 15:15-16:00 on Thursday 9 March in Högbomsalen in Geohuset, entitled: Fossil amphibians and reptiles as a proxy for reconstruction of Cenozoic climate evolution.
- Together with RA1 scientists and a selected group of international specialists, Helen Coxall and Margret Steinhorsdottir are working on a review paper on the Eocene-Oligocene transition, following the workshop last month. The review paper is led by RA1-RA6 funded post doc, David Hutchinson.



- Margret Steinthorsdottir will be participating in an invited PAGES workshop on Cenozoic (last 66 million years) CO₂ proxies in the Lamont-Doherty Earth Observatory at Columbia University March 15-17.

Research Area 7: Landscape Processes and Climate.

- RA7 had their kick-off meeting with more than 40 participants. All had speed talks, 2 min/person, followed by time for discussion of new research collaborations.
- A call for seed money has been sent out. Deadline for application is March 17.
- A suggestion for a call for larger funding is on the agenda for the SAG-meeting 6 March

Research Area 8: Biodiversity and Climate

- After have received applications in response to our call for funding, we have now decided activities to support using our seed money. We have decided to fund the following activities:
 - “Putting the μ in butterfly microclimates: characterization of abiotic climatic variability on scales that matter”. Main applicant: Philipp Lehmann. Sum: 47800:-
 - “The impact of heating on a multitrophic food web on oak”. Main applicant: Ayco Tack. Sum: 48000:-
 - Fågelkalendern; “Ansökan om 5% löneandel under ett år från RA8; Cecilia Kullberg”. Main applicant: Cecilia Kullberg. Sum: 37750:-
 - “Local climate and habitat pressure in Swedish oak forests across time and space”. Main applicant: Ian Brown. Sum: 36000:-
 - “Using museum DNA samples to help untangle demographic and adaptive effects on genetic variation in butterfly life cycle regulation”. Main applicant: Olle Lindestad. Sum: 15000:-
 - “Historical land use changes and their influence on tree growth in the Stockholm archipelago”. Main applicant: Eva Rocha. Sum: 19000:-
- Our preparations for a meeting discussing suggestions for PhD and post-doc positions at Tovetorp in April continues.

Coordination & Communication

- **Annika Burström** has started as coordinator and communicator at the Bolin Centre as of 1 March. Annika works 50 % for the Bolin Centre and 50 % for Föreningen för Utvecklingsfrågor, FUF. If you would like to contact the Bolin Centre you can use the email bolin@su.se, which reaches both Karin Jonsell and Annika Burström.
- **Bolin Centre Seminars:** The RA2 seminar in the new seminar series was very interesting and a link to the recorded film can be found on the Bolin Centre website soon.
- **Bolincentrets klimatfestival:** The planning of the Bolin Centre Climate Festival has progressed to include activities for children at comprehensive school and 14 lectures by Bolin Centre scientists for upper secondary school and the general public. The festival will also include an exhibition with booths from many external as well as internal organizations. The Bolin Centre will also act as a host for a workshop for teachers held by the Stockholm International Water Institute. If you have ideas and/or would like to participate, please contact Annika Burström. For the updated programme, see www.bolin.su.se/index.php/bolin-days-for-youngsters/543-bolincentrets-klimatfestival.
- **Investigation on outreach activities:** The investigation report of outreach activities at the Bolin Centre will be delivered by Gabrielle Stockmann 6 March.
- **Sponsoring of conferences and workshops:** The coordinators and communicators organize all central Bolin Centre events and have unfortunately no time to help with other workshops and conferences (and Karin Jonsell will no longer take part in the organisation of the conference *Past Gateways*). However, the Bolin Centre can sponsor conferences with nice give aways! Apply to individual Research Areas for financial funding.
- **Products:**
 - As stated above, if you are arranging a meeting/workshop/conference with a connection to climate,



you can borrow Bolin Centre rollups and get leaflets and some give aways for free.

- If you don't have a Bolin Centre T-shirt or a buff, please come to the Bolin Centre office in S314 in the Geoscience Building.
- If you want to annoy your friends, we have teasing sticks for you to collect.
- The new CO2-game will be ordered soon.
- The Air molecule-game can be borrowed, but we only have two sets.
- The new big and blue Bolin Centre bags will arrive in the middle of June.
- **Coming events:**
 - **Bolin Centre Seminar Series:**
 - Research Area 3: Friday 24 March, 2017, 13:00–14:00, Ahlmannsalen, Geoscience Building. *»Achilles heel« of carbon capture and storage* by Prof. Sigurdur Reynir Gislason, University of Iceland's Institute of Earth Sciences
 - Research Area 4: Wednesday 19 April, 2017, 10:00–11:00, Ahlmannsalen, Geoscience Building. *Linking observational studies, land surface modeling and atmospheric simulations to gain new insights into Arctic permafrost ecosystems.* Mathias Goeckede, Max Planck Institute for Biogeochemistry, Jena, Germany
 - Research Area 5: Monday 22 May, 2017, 13:00–14:00, Ahlmannsalen, Geoscience Building. *Do we need to account for ecology to model climate change?* Ben Smith, Lund University
 - **Bolincentrets klimafestival:** 15–18 May, see www.bolin.su.se/index.php/bolin-days-for-youngsters/543-bolincentrets-klimafestival
 - **Bert Bolin Climate Lecture:** Dr. Thomas Cronin, U.S. Geological Survey, Eastern Geology & Paleoclimate Science Centre, has been named as the Bert Bolin Climate Lecturer 2017. He will give a public popular lecture 18 May in Aula Magna at 14. At the same day he will give a Bolin Centre Science Seminar in Nordenskiöldsalen at 10.
 - **Bolin Days:** This years Bolin Days are scheduled to 21-23 November.
 - **ESAG visit:** The External Science Advisory group, see www.bolin.su.se/index.php/external-science-advisory-group will visit during the Bolin Days 21-23 November.
 - **AGU conference:** The Bolin Centre will have a booth at the coming AGU in New Orleans, 11-15 December, see <https://fallmeeting.agu.org/2017>.
 - Please visit www.bolin.su.se for more events

Bolin Centre Database

- The application to the VR call "Infrastructure for the integration and accessibility of data for climate-related research" was submitted on March 7. For more information see the Newsletter 2017-1 or contact Anders Moberg on bolindata@su.se.

Bolin Centre Linking Program

- The next round of matching is scheduled to the Bolin Days in November.

Individual news and initiative

- Bolin Centre scientist Nina Kirchner is a co-leader on the Swedish Maritime Robotics Centre which has received 100 MSEK from the Swedish Foundation for Staregic Reseach, see www.bolin.su.se/index.php/news/537-100-msek-grant-to-maritime-robots
- Steve Lyon has received a grant of 1.17 MSEK from VR fro the project *Modernizing Nepal's Groundwater Resources*, see www.natgeo.su.se/english/about-us/news/new-research-funding-for-steve-lyon-1.318589
- Bolin Centre scientists Fredrik Charpentier Ljungqvist, Paul J. Krusic, Gudrun Brattström and Hanna S. Sundqvist are authors to the article "Northern Hemisphere temperature patterns in the last 12 centuries" (2012) in *Climate of the Past*. This is the most downloaded article of all (more than 47 000 times) since the journal started

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- in 2006, see www.clim-past.net/most_downloaded.html
- Citizen science to study ecological effects of climate
 - Fågelkalendern (The Bird Calendar) is a long-term, nation-wide project that will monitor Swedish bird phenology in a standardised way using citizen science. The project has been developed by BirdLife Sweden, Stockholm University and the Swedish University of Agricultural Sciences, within the Swedish National Phenology Network and will start this spring. At present more than 1000 persons have shown interest in becoming phenology observers for the project.
 - Please go to naturenskalender.se to read more about the project and sign up to be a phenology observer!
 - We are at present finalizing the citizen science instructions and the dedicated mobile phone app before the project is officially launched later this spring.
 - On the 25th of February the radio show 'Naturmorgon' interviewed the project leader Cecilia Kullberg, see <http://sverigesradio.se/sida/artikel.aspx?programid=1027&artikel=6638008>
 - Fågelkalendern also presented a poster at the annual Oikos meeting for Swedish Ecologists in Lund on 7-9 of February 2017.
 - We have received funding from the Bolin Centre RA8 and by Stockholm University through the External Relations and Communications Office.

Outreach by Bolin Centre scientists

- Ilona Riipinen has been interviewed about how clouds clean the air from particles, see the Wallenberg Academy Fellows website, www.wallenberg.com/kaw/forskning/hur-moln-renar-luften-fran-partiklar
- Per Holmlund has been interviewed about retreating glaciers in the Swedish mountains by SR Studio Ett, see sverigesradio.se/sida/artikel.aspx?programid=1637&artikel=6638209
- Ninis Rosqvist has been interviewed about growing glaciers in New Zealand by SR Vetenskapsradion, see sverigesradio.se/sida/artikel.aspx?programid=406&artikel=6630376
- Per Holmlund has published a book about Swedish arctic photography titled *Frusna ögonblick, Svensk Polarfotografi 1861 – 1980*, see www.bolin.su.se/index.php/news/538-ny-bok-om-frusna-ogonblick-i-polartrakterna
- Nina Kirchner and Fredrik Charpentier Ljungqvist have translated the *Celebrating Antarctica* booklet from English to Swedish. *Celebrating Antarctica* informs about Antarctica and the signing of the Antarctic Treaty on Dec 1s, 1959. www.bolin.su.se/index.php/news/533-celebrating-antarctica-booklet-available-now-in-swedish The book is available at <http://celebratingantarctica.tumblr.com>.
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